<u>**IN THE CLAIMS**</u>:

1. (Currently Amended) A push-button signal receiving circuit for receiving a push-button signal and identifying a dialed number based on the received push-button signal, comprising:

first and second frequency detecting portion provided respectively for low- and high-frequency identification signals included in the received push-button signal, for detecting frequencies of input signals over one or more periods thereof to extract the identification signals;

third and fourth frequency detecting portion provided respectively for the low- and high-frequency identification signals included in the received push-button signal, for detecting the frequencies of the input signals over a number of periods greater than that of said first and second frequency detecting portion, to extract the identification signals;

valid signal determining portion for determining whether the received push-button signal is valid or not based on results of determination as to coincidence of continuance times of the identification signals extracted by said first and second frequency detecting portion, coincidence of the frequencies detected by said first and third frequency detecting portion, and coincidence of the frequencies detected by said second and fourth frequency detecting portion; and

dialed number output portion for outputting the dialed number based on the detected low and high frequencies if the push-button signal is judged valid by said valid signal determining portion<u>,</u>

<u>wherein said first, second, third and fourth frequency detecting portion each measure a time required until the number of times the signal level of the input</u>

identification signal crosses a threshold reaches a predetermined number, determine whether or not the measured time falls within an allowable time range, and detect the frequency of the identification signal, and

wherein the allowable time range set in said first and second frequency detecting portion per period of the identification signal is wider than that set in said third and fourth frequency detecting portion.

2. (Canceled)

3. (Canceled)

4. (Original) The push-button signal receiving circuit according to claim 1, wherein said valid signal determining portion judges the received push-button signal to be valid if the identification signals extracted by said first and second frequency detecting portion continue for a fixed time and if the frequencies detected by said first and third frequency detecting portion coincide and if the frequencies detected by said second and fourth frequency detecting portion coincide.

5. (Original) The push-button signal receiving circuit according to claim 1, wherein said valid signal determining portion judges a valid length of the push-button signal to be terminated if the identification signals extracted by said first and second frequency detecting portion have discontinued for a fixed time.

6. (Original) The push-button signal receiving circuit according to claim 1, wherein said third and fourth frequency detecting portion start the frequency detection when the identification signals are extracted by said first and second frequency detecting portion.

7. (Original) The push-button signal receiving circuit according to claim 1, wherein said third and fourth frequency detecting portion terminate the frequency detection when the identification signals extracted by said first and second frequency detecting portion has discontinued.

8. (Currently Amended) A push-button signal detection method for receiving a push-button signal and identifying a dialed number based on the received push-button signal, comprising:

performing first and second frequency detection processes each with respect to low- and high-frequency identification signals included in the received push-button signal, said first frequency detection process being a process for detecting frequencies of input signals over one or more periods thereof to extract the identification signals, said second frequency detection process being a process for detecting the frequencies of the input signals over a number of periods greater than that of said first frequency detection process, to extract the identification signals;

judging that the received push-button signal is valid if the frequencies detected in said first and second frequency detection processes coincide with each other when the

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identification signals extracted in said first frequency detection process have continued for a fixed time; and

outputting the dialed number based on the detected low and high frequencies if the received push-button signal is judged valid,

wherein said first, second, third and fourth frequency detecting portion each measure a time required until the number of times the signal level of the input identification signal crosses a threshold reaches a predetermined number, determine whether or not the measured time falls within an allowable time range, and detect the frequency of the identification signal, and

wherein the allowable time range set in said first and second frequency detecting portion per period of the identification signal is wider than that set in said third and fourth frequency detecting portion.